

REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicants thank the Examiner for carefully considering this application and for indicating that the drawings filed on September 30, 2003, are accepted.

Disposition of Claims

Claims 1-8, 11, 14-19, 21-25, and 28 are currently pending in this application. Claim 14 has been canceled by this reply. Claims 1, 11, 25, and 28 are independent. The remaining claims depend, directly or indirectly, from claims 1 and 11.

Claim Amendments

The independent claims have been amended to recite: i) the simulation image is obtained by compiling the simulation design; ii) a first implementation of the simulation design is associated with the test simulator, and a second implementation of the simulation design is associated with the reference simulator; and iii) that the first implementation of the simulation design is mapped to the second implementation using mapping rules that are part of the user data. Further, the independent claims have been amended to recite that an error detected by the comparison result is displayed and corrected.

Applicant asserts that no new subject matter is added by way of these amendments. Support for these amendments may be found, for example, in paragraphs [0037] and [0052]-[0053] of the Specification.

Rejections under 35 U.S.C. § 101

The Examiner asserts that the rejection of claims 1-30 under 35 U.S.C. § 101 is maintained (*see* Office Action mailed October 6, 2006, page 7). To the extent that this rejection may still apply to the amended claims, this rejection is respectfully traversed.

The purpose behind the requirements set forth in 35 U.S.C. § 101, is to limit patent protection to inventions that possess a certain level of “real world” value. *See* MPEP § 2106. That is, the claimed invention as a whole must accomplish a practical application by producing a “useful, concrete, and tangible result.” *See* State Street Band and Trust Co. v. Signature Financial Group, Inc. 149 F.3d 1368, 1373.

The amended independent claims recite “wherein the comparison result is used to debug at least one selected from the group of the simulation design and the test simulator, by correcting *and displaying* an error detected in the comparison result” [emphasis added]. Support for this amendment may be found, for example, in paragraphs [0052]-[0053] of the Specification. Specifically, the comparison result is displayed so that a designer can see whether an error exists, and a detected error is then debugged/corrected. Further, the comparison result may be displayed on the monitor of a computer system, as shown in Figure 3 of the present application.

In view of the above, Applicants respectfully assert that the independent claims clearly recite a useful, concrete, and tangible result by allowing the comparison result to be displayed so that errors can be detected and debugged. Accordingly, withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. § 112

Claims 1-8, 11, 14-19, 21-25, and 28 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner asserts that the phrases “at least one” and “consisting of” conflict with each other. Independent claims 1, 11, 25, and 28 have been amended to remove the phrase “consisting” in accordance with the Examiner’s suggestions. Thus, the independent claims now recite “at least one selected from the group of.” Accordingly, withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. § 102

Claims 1-5, 7-8, 11, 14-16, 18-19, 21-25, and 28 are rejected under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 6,141,630 (“McNamara”). Claim 14 has been canceled by this reply, thus this rejection is now moot with respect to claim 14. To the extent that this rejection may still apply to the amended claims, this rejection is respectfully traversed.

Turning to the rejection of the claims, for anticipation under 35 U.S.C. § 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. *See* MPEP § 2131. The Applicant respectfully asserts that McNamara does not disclose user data comprising mapping rules for mapping a first implementation of a simulation design to a second implementation of the simulation design.

McNamara relates to automated design verification using a test bench that simulates a design with test vectors (*see* McNamara, Abstract). The cited portions of McNamara disclose that the test generator creates a test vector by determining variables/conditions that need to be set

so that the simulated design transitions to an untested element from a currently active basic block (see McNamara col. 4, ll. 46-51). In addition, the test generator receives results generated by a functional model, which generates a set of expected results for a simulated design by implementing logical functions that equate to the set of commands contained within the simulation design (see McNamara, col. 5, ll. 33-48). However, none of the functional model or the test vector created by the test generator taught or suggested by McNamara includes *mapping rules* that are used to map a first implementation of the simulation design associated with the test simulator to a second implementation of the simulation design associated with the reference simulator, as explicitly recited in the amended claims. Moreover, McNamara does not even contemplate two different implementations of a simulated design, where one implementation is for a test simulator, and the other implementation is for a reference simulator, as explicitly recited in the amended claims. Further, it necessarily follows that McNamara cannot disclose that the user data comprises the mapping rules that are used to map the two implementations of the simulation design.

In view of the above, it is clear that McNamara fails to support the rejection of the amended independent claims. Thus, amended independent claims 1, 11, 25, and 28 are patentable over McNamara. Dependent claims are patentable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. § 103

Claims 6 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over McNamara and further in view of US Patent No. 6,886,145 ("Davidson"). To the extent that this rejection may still apply to the amended claims, this rejection is respectfully traversed.

As described above, McNamara fails to teach or suggest the limitations of the amended independent claims. Further, Davidson fails to supply that which McNamara lacks, as evidenced by the fact that the Examiner relies on Davidson solely for the purpose of teaching that the simulation image is executed in lockstep by the test simulator and the reference simulator (*see* Office Action mailed October 6, 2006, page 6).

In view of the above, it is clear that the amended independent claims are patentable over McNamara and Davidson, whether considered separately or in combination. Dependent claims 6 and 17 are patentable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicants believe this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number

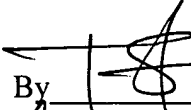
Application No.: 10/675,748

Docket No.: 03226/324001; P8928

listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591
(Reference Number 03226.324001).

Dated: January 5, 2007

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